

ORDINANCE NO. 2022-013

**AN ORDINANCE OF THE CITY COUNCIL OF THE CITY OF
SAN BUENAVENTURA ADOPTING BY REFERENCE THE
2022 EDITION OF THE CALIFORNIA BUILDING CODE
AND AMENDING CERTAIN PROVISIONS THEREOF
THROUGH EXPRESS FINDINGS OF LOCAL NECESSITY**

The City Council of the City of San Buenaventura does ordain as follows:

SECTION 1: FINDINGS. The City Council finds that certain local climatic, geological, or topographical conditions exist as follows:

- A. Climatic. The City has: 1) periods of high temperatures accompanied by low humidity and high winds each year. These conditions could create an environment in which the fire department may have great difficulty in controlling fires occurring in hillside brush areas as well as structures not having built in fire protection; 2) periods of intense rainfall, which create the need for special drainage precautions; 3) moist coastal air and some corrosive native soil.
- B. Geological. The City has: 1) areas with expansive soils and hillsides that are subject to mudflows and unstable conditions. Special foundation considerations and soils analyses requirements must be in place to provide a reasonable degree of structural integrity for buildings constructed in these areas; 2) several earthquake faults that, when active, will impose unique lateral loads on structures in the City. Special lateral structural design criteria are needed to resist these lateral loads imposed by active earthquake faults in the City; 3) Earthquakes will block/damage roads and limit the Fire Department's ability to access and fight fires. Built-in fire protection systems will provide the initial firefighting services until the Department can arrive on site; 4) areas of corrosive water and areas of very hard potable water. Special piping materials and provisions for on-site water treatment must be made.
- C. Topographical. The City has: 1) Existing hillside and flat land developments require special drainage precautions Structures are subject to water damage without special requirements addressing site drainage; 2) many older City streets are very narrow and difficult for the Fire Department to stage equipment, clear wildland and fight fires. Hillside conditions may also inhibit ocean views.
- D. Administrative. Administrative changes are those made to either sections of the State Building Standards Codes that are not specifically adopted by a State agency or that are needed to coordinate the State Codes with the City's local Charter and Municipal Code. Administrative amendments shall not result in waiving or reducing the State Building Standards Codes regulations nor create new building standards.

- E. After due consideration, the City Council finds and determines that these local climatic, geological, and topographical conditions make modifications and changes to the 2022 Edition of the California Building Code reasonably necessary to provide sufficient and effective protection of life, health, and property. A summary the applicable findings as they relate to each local amendment is attached hereto as Exhibit "A," incorporated herein by this reference.

SECTION 2: Chapter 12.115 of Division 12 of the San Buenaventura Municipal Code ("SBMC") is amended in its entirety to read as follows:

"Chapter 12.115 Building Standards

Section 12.115.010. Adoption of California Building Code, 2022 Edition.

Pursuant to California Government Code sections 50022.1 to 50022.8, inclusive, Part 2 of Title 24 of the California Code of Regulations, known as the California Building Code, 2022 Edition ("CBC"), including all standard printed Chapters and Sections (whether adopted by the State matrix or not), is adopted by reference subject to the amendments, additions, and deletions set forth in this Chapter. The CBC will apply to all occupancies identified by this code. One true copy of the CBC is on file in the Office of the Building Official and is available for public inspection as required by law.

Section 12.115.020. Amendments.

- A. The City Council finds that certain local climatic, geological, and/or topographical conditions exist as follows:
1. *Climatic.* The City experiences periods of high temperatures accompanied by low humidity and high winds each year. These conditions could create an environment in which the fire department may have great difficulty in controlling fires occurring in hillside brush areas as well as structures not having built-in fire protection. The City also experiences periods of intense rainfall, which create the need for special drainage precautions.
 2. *Geological.* The City is located in an area with expansive soils and includes hillsides that are subject to mudflows and unstable conditions. Special foundation considerations and soils analyses requirements must be in place to provide a reasonable degree of structural integrity for buildings constructed in these areas. Several earthquake faults run through the City that, when active, will impose unique lateral loads on structures in the City. Special lateral structural design criteria are needed to resist these lateral loads imposed by active earthquake faults in the City.

3. *Topographical.* The City has hillside and flat land developments that require special drainage precautions. Structures would be subject to water damage without special requirements addressing site drainage.
- B. The CBC is therefore modified, amended, added to, and changed based on the foregoing findings as further set forth below:

1. Section 101.4.8 is added to read as follows:

101.4.8 Post Damage Assessment. This section establishes standard placards to be used to indicate the condition of a structure for continued occupancy. The section further authorizes the Building Official and his/her authorized representatives to post the appropriate placard at each entry point to a building or structure upon completion of a safety assessment.

101.4.8.1 Application of Provisions. The provisions of this chapter are applicable to all buildings and structures of all occupancies regulated by the City of San Buenaventura. The City Council may extend the provisions as necessary.

101.4.8.2 Definition. Safety assessment is a visual, non-destructive examination of a building or structure for purposes of determining the condition for continued use or occupancy.

101.4.8.3 Placards. The following are verbal descriptions of the official placards to be used to designate the condition for continued occupancy of buildings or structures.

INSPECTED (Green) - Lawful Occupancy Permitted is to be posted on any building or structure wherein no apparent structural hazard has been found. This placard is not intended to mean that there is no damage to the building or structure.

RESTRICTED USE (Yellow) – Restricted Use is to be posted on each building or structure that has been damaged wherein the damage has resulted in some form of restriction to the continued occupancy. The individual who posts this placard will note in general terms the type of damage encountered and will clearly and concisely note the restrictions on continued occupancy.

UNSAFE (Red) - Do Not Enter or Occupy is to be posted on each building or structure that has been damaged such that continued occupancy poses a threat to life safety. Buildings or structures posted with this placard shall not be entered under any circumstance except as authorized in writing by the Building Official, or his/her authorized representative. Safety

assessment teams shall be authorized to enter these buildings at any time. This placard is not to be used or considered as a demolition order.

The placard must note in general terms the type of damage encountered, the Municipal Code section violated and the following text: The City of Ventura, 501 Poli St, Room 117, Ventura, CA 93001 (805) 654-7869.

Once it has been attached to a building or structure, a placard is not to be removed, altered or covered until done so by an authorized representative of the Building Official. It shall be unlawful for any person, firm or corporation to alter, remove, cover or deface a placard unless authorized pursuant to this section.

2. Section 104.5 is replaced in its entirety to read as follows:

104.5 Identification. The building officials shall wear official, City issued, photo identification at all times when serving the public.

3. Section 105.2, Building Item 1 is replaced in its entirety to read as follows:

1. Detached Sheds. A single, one-story, detached accessory structure used as a tool or light storage shed, playhouse, and similar uses, provided the floor area is not greater than 120 square feet, and that said structure is not taller than 8'6" in maximum height measured from grade (grade is defined as the lowest point within 5'0" of the perimeter of a structure), and is located on a residential lot and R-3 Occupancy only, has no electrical, plumbing or mechanical equipment and in which the structure does not obstruct or divert the flow of rain water from one property to another. Only one detached shed per parcel; located in rear yard only and 5'0" from any existing building; eaves projections shall not exceed 16" nor extend over the property line.

4. Section 105.2, Building Item 2 is amended to read as follows:

2. Fences not over 6 feet.

5. Section 105.2, Building Item 12 is replaced in its entirety to read as follows:

12. Window and Door Awnings. Window and door awnings in group R-3 and U occupancies, supported by an exterior wall that does not project more than 54 inches (1372 mm) from the exterior wall and that do not require additional support. Door awnings are to be lightweight construction (i.e., not to exceed 5 lbs. per sq. ft.). Required fire separation distance from property line to be maintained (min. 5 ft. from property line).

6. Section 105.3, Item 8 is added to read as follows:
 8. Have obtained Planning Division approval to apply for a building permit.

7. Section 105.3, Item 9 is added to read as follows:
 10. Have paid all applicable application, plan check, and/or permit fees as set forth in the City's most current User Fee resolution.

8. Section 109.2 is replaced in its entirety to read as follows:

Section 109.2. Schedule of Permit Fees. Fees shall be established, become effective, and be applied to applications, plan checks, and permits as approved by City Council resolution or ordinance.

9. Section 109.6 is amended to read as follows:

Section 109.6. Fee Refunds. The Building Official may authorize refunding of a fee paid hereunder which was erroneously paid or collected.

The Building Official may authorize refunding of not more than 80 percent of the building permit fee when no work has been done under a permit issued in accordance with this code.

The Building Official may authorize refunding of not more than 80 percent of the Plan Check Deposit fee paid when an application for a permit for which a plan check deposit has been paid is withdrawn or cancelled before any examination time has been expended.

The Building Official shall not authorize the refunding of any fee paid, except upon written application filed by the original permittee not later than 180 days after the date of the fee payment.

10. An additional Exception to Section 111.1 is added to read as follows:

Exception: A signed City permit job card will serve as the Certificate of Occupancy for residential and residential accessory buildings of 2 units or less.

11. Section 113 is replaced in its entirety to read as follows:

Section 113 Local / Housing Appeals Board. A Local / Housing Appeals Board (also identified as "Board" or "Board of Appeals") is established to hear and decide appeals of orders, decisions, or determinations made by the Building Official or Fire Marshal relative to the application and

interpretation of the building requirements of the city. The Board will consist of seven members who will be appointed by the City Council. In addition, the Building Official, or his or her designee, will be an ex-officio member and will act as secretary to the Board. Five of the voting members will constitute a quorum; the ex-officio member will have no vote. Each of the voting members will be qualified by experience and training to consider matters pertaining to construction regulations and each will be an actual resident of the City during his/her incumbency. Whenever possible, the Board will be composed of members representing the following specialties: General Contractor, Licensed Professional Engineer, Licensed Architect, Disabled Access Accessibility Advocate, Planning/Zoning Professional, Licensed Real Estate Professional. If a Board member ceases at any time to be an actual resident of the City, the office held by that member will be deemed vacant. Of the members of the Board first appointed, three will be appointed for initial terms of four years. Their successors will be appointed for terms of four years. Each member will serve until his or her successor is appointed. The Board will adopt reasonable rules and regulations for conducting its business and will render all decisions and findings in writing to the appellant with a copy to the Building Official. The Board may recommend to the City Council such new legislation as it may deem appropriate. The Local / Housing Appeals Board will serve as the appellate board or body whenever any of the codes adopted by reference provide for the same. The Local / Housing Appeals Board will also act as the Appeals Board for the Earthquake Hazard Reduction Ordinance. Appeals to the Board will be processed in accordance with administrative policies and on application forms provided by the Building Official. A fee established by City Council resolution will accompany an application for a hearing before the Board. Copies of any rules and regulations adopted by the Board will be delivered to the Building Official, who will make them freely accessible to the public. The Board will have no authority relative to interpretation of the administrative provisions of this Code nor will the Board be empowered to waive requirements of this Code or the technical codes.

113.1. *Appeal to City Council.*

- A. Local / Housing Appeals Board action. An application for appeal to the City Council may be filed by the applicant or an aggrieved person, as defined in Chapter 24.110, affected by a decision of the Local/Housing Appeals Board, provided that the appeal is filed in writing within thirty days after the Board publishes a final decision. Notwithstanding the definition of an aggrieved person in Chapter 24.110, any member of the City Council may also be considered an

aggrieved person affected by such a determination for purposes of this section. In addition, the City Council may on its own motion, within thirty days after the final decision, or at its next regular meeting for which Brown Act agenda requirements can be satisfied, whichever is later, elect to review and consider any action of the Local/Housing Appeals Board.

- B. Application for appeal. An application for appeal required by this section shall be filed by the appellant with the City Clerk and shall clearly state the grounds of appeal and the action which appellant requests the City Council to take. If the challenged decision consists of one or more actions based on particular findings or conditions that the appellant believes were erroneously or improperly included or omitted, the appeal shall specify which findings or conditions were erroneous or improper or which findings or conditions should additionally be imposed. Notwithstanding any provision of this section to the contrary, no application for appeal need be filed by the City Council, or any member or representative thereof, when the city council elects, by majority vote on its own motion, to review and consider an action pursuant to subsection A. of this section.

113.2 Action by City Council.

- A. Hearing date. The City Manager or City Clerk shall fix the time for hearing the appeal.
- B. Notice. The City Clerk shall notice the hearing before the City Council as required by chapter 24.560
- C. Record on appeal. All materials on file with the director shall be part of the City Council hearing record. In addition, any party may offer supplemental evidence during the appeal hearing.
- D. De novo review. The City Council is not limited to consideration of the material in the record on appeal. The City Council may review any matter or evidence relating to the action on the application regardless of the specific issue appealed.
- E. Actions. The City Council may:
 - 1. Continue action on the appeal for a period of time deemed appropriate by the City Council;
 - 2. Sustain the Local / Housing Appeals Board action upon finding that all applicable findings have been correctly made and all provisions of local ordinance, or other provisions of law, are complied with;
 - 3. Sustain the Local / Housing Appeals Board action but require whatever additional conditions or guarantees as it

- may deem necessary or desirable to further the purposes of local ordinance or comply with other provisions of law;
4. Overrule the Local / Housing Appeals Board, action without prejudice upon a finding that all applicable findings have not been correctly made or all provisions of local ordinance are not complied with but that, in either case, the application has merit and may possibly be modified to comply with local ordinance or other provisions of law;
 5. Overrule the Local / Housing Appeals Board action upon finding that all required findings have not been correctly made or all provisions of local ordinance, or other provisions of law, are not complied with; or
 6. Take such other action as may be necessary or desirable to further the purposes of local ordinance or other provisions of law.
- F. Vote required. A simple majority of the City Council members voting shall be required to sustain, overrule, or modify a decision by the Local / Housing Appeals Board which is appealed, or to grant an appealed application where the Local / Housing Appeals Board has failed to act within the time allowed pursuant to local ordinance.
- G. Effective date. A decision of the City Council sustaining, overruling or modifying any decision, determination or requirement of the Local / Housing Appeals Board shall be final and conclusive upon the rendering of the decision unless otherwise provided by the city council in rules of procedure or elsewhere.
- H. Effect of denial without prejudice. A decision that has been denied without prejudice on appeal may be refiled at any time but must be accompanied by the prescribed filing fee.

113.3 Hearing transcript not required.

No provision of this Code shall be construed to require the keeping of a verbatim hearing transcript except as may be required by state law.

12. Section 114.5 is added to read as follows:

114.5 Notice of Non-Compliance. Whenever the Building Official determines that work has been done without the required permit, or has not been completed in accordance with the requirements of this Code, the Building Official may record a Notice of Noncompliance with the Office of the County Recorder and shall notify the owner of the property of such action. The Notice of Noncompliance shall describe the property, shall set forth the noncomplying conditions, and shall state that the property owner has been so notified.

The Building Official shall submit a Notice of Compliance to the County Recorder when it is determined that noncomplying conditions have been corrected or removed. A fee as set forth in the City User Fees Resolution will be charged to the property owner for submittal of a Notice of Compliance.

13. Section 116 is replaced in its entirety to read as follows:

116 Unsafe Structures and Equipment. Unsafe structures and equipment are regulated by the 2021 International Property Maintenance Code as adopted, and amended from time to time, by the City of San Buenaventura.

14. Section 1505.1, including its exception but excluding its subsections and Table 1505.1, is amended to read as follows:

Section 1505.1. General. Roof assemblies shall be divided into the classes defined below. Class A and B roof assemblies and roof coverings required to be listed by this section shall be tested in accordance with ASTM E 108 or UL 790. Wood roof coverings shall be tested in accordance with ASTM D 2898. The minimum roof coverings installed on structures shall comply with Table 1505.1.

15. Section 1505.1.2 is amended by changing the reference from Class C to Class B to read as follows:

Section 1505.1.2 Roof coverings within all other areas. The entire roof coverings of every existing structure where more than 50 percent of the total roof area is replaced within any one-year period, the entire roof covering of every new structure, and any roof covering applied in the alteration, repair or replacement of the roof of existing structures, shall be a fire-retardant roof covering that is at least Class B.

16. Section 1505.1.4 is added to read as follows:

1505.1.4 Additions to Existing Buildings. In any 12 month period, additions of less than 26% of the existing roof area may be of Class B materials that match the existing roof. Additions in high fire hazard areas must meet the current high fire hazard area roofing requirements in addition to this section.

17. Table 1505.1 is amended to replace all references to Class C with Class B.

18. Section 1505.6 is amended in its entirety to read as follows:

Section 1505.6 Wood Shingles and Shakes. No wooden shingles or shakes, treated or untreated, shall be used for roof covering unless specifically allowed in Sections 1505.1.2 or 1505.1.4 of this code.

19. Section 1507.3.1 is amended to read as follows:

Section 1507.3.1 Deck requirements. Concrete and clay tile shall be installed only over solid structural sheathing boards.

20. Section 1613.5 is added as follows:

Section 1613.5. Local modification to standard ASCE 7. Standard ASCE 7, section 12.12.3, Equation 12.12-1 is amended to read as follows:

$$\square_M = C_d \square_{max} \quad (\text{Eq. 12.12-1})$$

21. Section 1613.6 is added as follows:

Section 1613.6. Local modification to standard ASCE 7. Standard ASCE 7, section 12.2.3.1, Exception 3.

Detached one-and two-family dwellings up to two stories in height of light frame construction.

22. Section 1613.7 is added as follows:

Section 1613.7. Local modification to standard 7. Standard ASCE 7, section 12.11.2.2.3.

Wood Diaphragms. In wood diaphragms, the anchorage of concrete or masonry structural walls to wood diaphragms shall be in accordance with AWC SD PWS 4.1.5.1 and this section. Continuous ties shall be in addition to the diaphragm sheathing. Anchorage shall not be accomplished by use of toe nails or nails subject to withdrawal nor shall wood ledgers or framing be used in cross-grain bending or cross-grain tension. The diaphragm sheathing shall not be considered effective as providing ties or struts required by this section.

For structures assigned to seismic design category D, E, or F wood diaphragms supporting concrete or masonry walls, wood diaphragms shall comply with the following:

1. The spacing of continuous ties shall not exceed 40 feet. Added chords of diaphragms may be used to form sub-diaphragms to transmit the anchorage forces to the main continuous crossties.

2. The maximum diaphragm shear used to determine the depth of the sub-diaphragm shall not exceed 75% of the maximum diaphragm shear.

23. Section 1613.8 is added to read as follows:

1613.8 Seismic Design Provisions for Hillside Buildings.

1613.8.1 Purpose. The purpose of this section is to establish minimum regulations for the design and construction of new buildings and additions to existing buildings when constructing such buildings on or into slopes steeper than one unit vertical in three units horizontal (33.3%). These regulations establish minimum standards for seismic force resistance to reduce the risk of injury or loss of life in the event of earthquakes.

1613.8.2 Scope. The provisions of this section shall apply to the design of the lateral-force-resisting system for hillside buildings at and below the base level diaphragm. The design of the lateral-force-resisting system above the base level diaphragm shall be in accordance with the provisions for seismic and wind design as required elsewhere in this Division.

Exception: Non-habitable accessory buildings and decks not supporting or supported from the main building are exempt from these regulations.

1613.8.3 Definitions. For the purposes of this section certain terms are defined as follows:

BASE LEVEL DIAPHRAGM is the floor at, or closest to, the top of the highest level of the foundation.

DIAPHRAGM ANCHORS are assemblies that connect a diaphragm to the adjacent foundation at the uphill diaphragm edge.

DOWNHILL DIRECTION is the descending direction of the slope approximately perpendicular to the slope contours.

FOUNDATION is concrete or masonry which supports a building, including footings, stem walls, retaining walls, and grade beams.

FOUNDATION EXTENDING IN THE DOWNHILL DIRECTION is a foundation running downhill and approximately perpendicular to the uphill foundation.

HILLSIDE BUILDING is any building or portion thereof constructed on or into a slope steeper than one unit vertical in three units horizontal (33.3%).

If only a portion of the building is supported on or into the slope, these regulations apply to the entire building.

PRIMARY ANCHORS are diaphragm anchors designed for and providing a direct connection as described in Sections 1613.8.5 and 1613.8.7.3 between the diaphragm and the uphill foundation.

SECONDARY ANCHORS are diaphragm anchors designed for and providing a redundant diaphragm to foundation connection, as described in Sections 1613.8.6 and 1613.8.7.4.

UPHILL DIAPHRAGM EDGE is the edge of the diaphragm adjacent and closest to the highest ground level at the perimeter of the diaphragm.

UPHILL FOUNDATION is the foundation parallel and closest to the uphill diaphragm edge.

1613.8.4 Analysis and Design.

1613.8.4.1 General. Every hillside building within the scope of this section shall be analyzed, designed, and constructed in accordance with the provisions of this division. When the code-prescribed wind design produces greater effects, the wind design shall govern, but detailing requirements and limitations prescribed in this and referenced sections shall be followed.

1613.8.4.2 Base Level Diaphragm-Downhill Direction. The following provisions shall apply to the seismic analysis and design of the connections for the base level diaphragm in the downhill direction.

1613.8.4.2.1 Base for Lateral Force Design Defined. For seismic forces acting in the downhill direction, the base of the building shall be the floor at or closest to the top of the highest level of the foundation.

1613.8.4.2.2 Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 4.5 for bearing wall and building frame systems. The total base shear shall include the forces tributary to the base level diaphragm including forces from the base level diaphragm.

1613.8.5 Base Shear Resistance-Primary Anchors.

1613.5.5.1 General. The base shear in the downhill direction shall be resisted through primary anchors from diaphragm struts provided in the base level diaphragm to the foundation.

1613.8.5.2 Location of Primary Anchors. A primary anchor and diaphragm strut shall be provided in line with each foundation extending in the downhill direction. Primary anchors and diaphragm struts shall also be provided where interior vertical lateral-force-resisting elements occur above and in contact with the base level diaphragm. The spacing of primary anchors and diaphragm struts or collectors shall in no case exceed 30 feet (9,144 mm).

1613.8.5.3 Design of Primary Anchors and Diaphragm Struts. Primary anchors and diaphragm struts shall be designed in accordance with the requirements of Section 1613.5.8.

1613.8.5.4 Limitations. The following lateral-force-resisting elements shall not be designed to resist seismic forces below the base level diaphragm in the downhill direction:

1. Wood structural panel wall sheathing,
2. Cement plaster and lath,
3. Gypsum wallboard, and
4. Tension only braced frames.

Braced frames designed in accordance with the requirements of Section 2205.2.1.2 may be used to transfer forces from the primary anchors and diaphragm struts to the foundation provided lateral forces do not induce flexural stresses in any member of the frame or in the diaphragm struts. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.6. Base Shear Resistance-Secondary Anchors.

1613.8.6.1 General. In addition to the primary anchors required by Section 1613.5.5, the base shear in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in the base level diaphragm.

Exception: Secondary anchors are not required where foundations extending in the downhill direction spaced at not more than 30 feet (9,144 mm) on center extend up to and are directly connected to the base level diaphragm for at least 70% of the diaphragm depth.

1613.8.6.2 Secondary Anchor Capacity and Spacing. Secondary anchors at the base level diaphragm shall be designed for a minimum force equal to the base shear, including forces tributary to the base level diaphragm,

but not less than 600 pounds per lineal foot (8.76 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.6.3 Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.7 Diaphragms Below the Base Level-Downhill Direction. The following provisions shall apply to the lateral analysis and design of the connections for all diaphragms below the base level diaphragm in the downhill direction.

1613.8.7.1 Diaphragm Defined. Every floor level below the base level diaphragm shall be designed as a diaphragm.

1613.8.7.2 Design Force. Each diaphragm below the base level diaphragm shall be designed for all tributary loads at that level using a minimum seismic force factor not less than the base shear coefficient.

1613.8.7.3 Design Force Resistance-Primary Anchors. The design force described in Section 1613.8.7.2 shall be resisted through primary anchors from diaphragm struts provided in each diaphragm to the foundation. Primary anchors shall be provided and designed in accordance with the requirements and limitations of Section 1613.8.5.

1613.8.7.4 Design Force Resistance-Secondary Anchors.

1613.8.7.4.1 General. In addition to the primary anchors required in Section 1613.8.7.3, the design force in the downhill direction shall be resisted through secondary anchors in the uphill foundation connected to diaphragm struts in each diaphragm below the base level.

Exception: Secondary anchors are not required where foundations extending in the downhill direction, spaced at not more than 30 feet (9,144 mm) on center, extend up to and are directly connected to each diaphragm below the base level for at least 70% of the diaphragm depth.

1613.8.7.4.2 Secondary Anchor Capacity. Secondary anchors at each diaphragm below the base level diaphragm shall be designed for a minimum force equal to the design force but not less than 300 pounds per lineal foot (4.38 kN/m). The secondary anchors shall be uniformly distributed along the uphill diaphragm edge and shall be spaced a maximum of four feet (1,219 mm) on center.

1613.8.7.4.3 Design. Secondary anchors and diaphragm struts shall be designed in accordance with Section 1613.8.8.

1613.8.8 Primary and Secondary Anchorage and Diaphragm Strut Design. Primary and secondary anchors and diaphragm struts shall be designed in accordance with the following provisions:

1. **Fasteners.** All bolted fasteners used to develop connections to wood members shall be provided with square plate washers at all bolt heads and nuts. Washers shall be minimum 3/16 inch (4.8 mm) thick and two inch (51 mm) square for 1/2-inch (12.7 mm) diameter bolts, and 1/4-inch (6.4 mm) thick and 2-1/2-inch (64 mm) square for 5/8-inch (15.9 mm) diameter or larger bolts. Nuts shall be wrench tightened prior to covering.
2. **Fastening.** The diaphragm to foundation anchorage shall not be accomplished by the use of toenailing, nails subject to withdrawal, or wood in cross-grain bending or cross-grain tension.
3. **Size of Wood Members.** Wood diaphragm struts collectors, and other wood members connected to primary anchors shall not be less than three-inch (76 mm) nominal width. The effects of eccentricity on wood members shall be evaluated as required per Item 9.
4. **Design.** Primary and secondary anchorage, including diaphragm struts, splices, and collectors shall be designed for 125% of the tributary force.
5. **Allowable Stress Increase.** The one-third allowable stress increase permitted under Section 1605.3.2 shall not be taken when the working (allowable) stress design method is used.
6. **Seismic Load Factor.** The seismic load factor shall be 1.7 for steel and concrete anchorage when the strength design method is used.
7. **Primary Anchors.** The load path for primary anchors and diaphragm struts shall be fully developed into the diaphragm and into the foundation. The foundation must be shown to be adequate to resist the concentrated loads from the primary anchors.
8. **Secondary Anchors.** The load path for secondary anchors and diaphragm struts shall be fully developed in the diaphragm but need not be developed beyond the connection to the foundation.
9. **Symmetry.** All lateral force foundation anchorage and diaphragm strut connections shall be symmetrical. Eccentric connections may be permitted when demonstrated by calculation or tests that all

components of force have been provided for in the structural analysis or tests.

10. Wood Ledgers. Wood ledgers shall not be used to resist cross-grain bending or cross-grain tension.

1613.8.9 Lateral-Force-Resisting Elements Normal to the Downhill Direction.

1613.8.9.1 General. In the direction normal to the downhill direction, lateral-force-resisting elements shall be designed in accordance with the requirements of this section.

1613.8.9.2 Base Shear. In developing the base shear for seismic design, the response modification coefficient (R) shall not exceed 4.5 for bearing wall and building frame systems.

1613.8.9.3 Vertical Distribution of Seismic Forces. For seismic forces acting normal to the downhill direction the distribution of seismic forces over the height of the building using Section 12.8.3 of ASCE 7 shall be determined using the height measured from the top of the lowest level of the building foundation.

1613.8.9.4 Drift Limitations. The story drift below the base level diaphragm shall not exceed 0.005 times the story height. The total drift from the base level diaphragm to the top of the foundation shall not exceed 3/4 inch (19 mm). Where the story height or the height from the base level diaphragm to the top of the foundation varies because of a stepped footing or story offset, the height shall be measured from the average height of the top of the foundation. The story drift shall not be reduced by the effect of horizontal diaphragm stiffness.

Where code-prescribed wind forces govern the design of the lateral force resisting system normal to the downhill direction, the drift limitation shall be 0.0025 for the story drift and the total drift from the base level diaphragm to the top of the foundation may exceed 3/4 inch (19 mm) when approved by the Department. In no case, however, shall the drift limitations for seismic forces be exceeded.

1613.8.9.5 Distribution of Lateral Forces.

1613.8.9.5.1 General. The design lateral force shall be distributed to lateral-force-resisting elements of varying heights in accordance with the stiffness of each individual element.

1613.8.9.5.2 Wood Structural Panel Sheathed Walls. The stiffness of a stepped wood structural panel shear wall may be determined by dividing the wall into adjacent rectangular elements, subject to the same top of wall deflection. Deflections of shear walls may be estimated by Section 2305.3. Sheathing and fastening requirements for the stiffest section shall be used for the entire wall. Each section of wall shall be anchored for shear and uplift at each step. The minimum horizontal length of a step shall be eight feet (2,438 mm) and the maximum vertical height of a step shall be two feet, eight inches (813 mm).

1613.8.9.5.3 Reinforced Concrete or Masonry Shear Walls. Reinforced concrete or masonry shear walls shall have forces distributed in proportion to the rigidity of each section of the wall.

1613.8.9.6 Limitations. The following lateral force-resisting-elements shall not be designed to resist lateral forces below the base level diaphragm in the direction normal to the downhill direction:

1. Cement plaster and lath,
2. Gypsum wallboard, and
3. Tension-only braced frames.

Braced frames designed in accordance with the requirements of Chapter 22 of this Code may be designed as lateral-force-resisting elements in the direction normal to the downhill direction, provided lateral forces do not induce flexural stresses in any member of the frame. Deflections of frames shall account for the variation in slope of diagonal members when the frame is not rectangular.

1613.8.10 Specific Design Provisions.

1613.8.10.1 Footings and Grade Beams. All footings and grade beams shall comply with the following:

1. Grade beams shall extend at least 12 inches (305 mm) below the lowest adjacent grade and provide a minimum 5-foot distance horizontally from the bottom outside face of the grade beam to the face of the descending slope.
2. Continuous footings shall be reinforced with at least two No. 4 reinforcing bars at the top and two No. 4 reinforcing bars at the bottom.

3. All main footing and grade beam reinforcement steel shall be bent into the intersecting footing and fully developed around each corner and intersection.
4. All concrete stem walls shall extend from the foundation and reinforced as required for concrete or masonry walls.

1613.8.10.2 Protection Against Decay and Termites. All wood to earth separation shall comply with the following:

1. Where a footing or grade beam extends across a descending slope, the stem wall, grade beam, or footing shall extend up to a minimum 18 inches (457 mm) above the highest adjacent grade.

Exception: At paved garage and doorway entrances to the building, the stem wall need only extend to the finished concrete slab, provided the wood framing is protected with a moisture proof barrier.

2. Wood ledgers supporting a vertical load of more than 100 pounds per lineal foot (1.46 kN/m) and located within 48 inches (1,219 mm) of adjacent grade are prohibited. Galvanized steel ledgers and anchor bolts, with or without wood nailers, or treated or decay resistant sill plates supported on a concrete or masonry seat, may be used.

1613.8.10.3 Sill Plates. All sill plates and anchorage shall comply with the following:

1. All wood framed walls, including nonbearing walls, when resting on a footing, foundation, or grade beam stem wall, shall be supported on wood sill plates bearing on a level surface.
2. Power-driven fasteners shall not be used to anchor sill plates except at interior nonbearing walls not designed as shear walls.

1613.8.10.4 Column Base Plate Anchorage. The base of isolated wood posts (not framed into a stud wall) supporting a vertical load of 4,000 pounds (17.8 kN) or more and the base plate for a steel column shall comply with the following:

1. When the post or column is supported on a pedestal extending above the top of a footing or grade beam, the pedestal shall be designed and reinforced as required for concrete or masonry columns. The pedestal shall be reinforced with a minimum of four No. 4 bars extending to the bottom of the footing or grade beam. The top of exterior pedestals shall be sloped for positive drainage.

2. The base plate anchor bolts or the embedded portion of the post base, and the vertical reinforcing bars for the pedestal, shall be confined with two No. 4 or three No. 3 ties within the top five inches (127 mm) of the concrete or masonry pedestal. The base plate anchor bolts shall be embedded a minimum of 20 bolt diameters into the concrete or masonry pedestal. The base plate anchor bolts and post bases shall be galvanized and each anchor bolt shall have at least two galvanized nuts above the base plate.

1613.8.10.5 Steel Beam to Column Supports. All steel beam to column supports shall be positively braced in each direction. Steel beams shall have stiffener plates installed on each side of the beam web at the column. The stiffener plates shall be welded to each beam flange and the beam web. Each brace connection or structural member shall consist of at least two 5/8 inch (15.9 mm) diameter machine bolts.

24. Section 1704.6, excluding its subsections, is amended to read as follows:

Section 1704.6 Structural Observations. Where required by the provisions of Section 1704.6.1, the owner or the owner's authorized agent shall employ a structural observer to perform structural observations. Structural observation does not include or waive the responsibility for the inspections in Section 110 or the special inspections in Section 1705 or other section of this code. The structural observer shall be one of the following individuals:

1. The registered design professional responsible for the structural design, or
2. A registered design professional designated by the registered design professional responsible for the structural design.

The owner or owner's authorized agent shall coordinate and call a preconstruction meeting between the structural observer, contractors, affected subcontractors and inspectors, both special and municipal. The structural observer shall preside over the meeting. The purpose of the meeting shall be to identify the major structural elements and connections that affect the vertical and lateral load resisting systems of the structure and to review scheduling of the required observations, special inspections, and Building and Safety requirements for scheduling and documentation. A record of the meeting shall be included in the report submitted to the Building Official.

Observed deficiencies shall be reported in writing to the owner or owner's authorized agent, special inspector, contractor and the Building Official. Upon the form prescribed by the Building Official, the structural observer shall submit to the Building Official a written statement at each significant

construction stage stating that the site visits have been made and identifying any reported deficiencies which, to the best of the structural observer's knowledge, have not been resolved. A final report by the registered design professional responsible for the structural design which states that all observed deficiencies have been resolved is required before acceptance of the work by the Building Official.

25. Section 1705.3, including its exceptions but excluding its subsections, is amended to read as follows:

1705.3 Concrete construction. The special inspections and verifications for concrete construction shall be as required by this section and Table 1705.3.

Exception: Special Inspection shall not be required for:

1. Isolated spread concrete footings of buildings three stories or less above grade plane that are fully supported on earth or rock, where the structural design of the footing is based on a specified compressive strength, f'_c , no greater than 2,500 pounds per square inch (psi) (17.2 Mpa) regardless of the compressive strength specified in the construction documents or used in the footing construction..
2. Continuous concrete footings supporting walls of buildings three stories or less in height that are fully supported on earth or rock where:
 - 2.1. The footings support walls of light-frame construction;
 - 2.2. The footings are designed in accordance with Table 1809.7;
 - or
 - 2.3. The structural design of the footing is based on a specified compressive strength, f'_c , no greater than 2,500 pounds per square inch (psi) (17.2 Mpa), regardless of the compressive strength specified in the construction documents or used in the footing construction.
3. Nonstructural concrete slabs supported directly on the ground, including prestressed slabs on grade, where the effective prestress in the concrete is less than 150 psi (1.03 Mpa).
4. Concrete patios, driveways and sidewalks, on grade.

26. Section 1801.2 is added to read as follows:

1801.2 State Stormwater Discharge Permit Coordination. All site drainage components and system shall also comply with any State issued stormwater discharge permit requirements. Where State stormwater

discharge permits conflict with this code, the City Engineer and Chief Building Official will determine the most appropriate regulations from both documents that assure clean water discharges into State waterways and promotes the safety and general welfare of the community.

27. Section 1803.2 is amended to read as follows:

1803.2. Investigations required. Geotechnical investigations shall be conducted in accordance with Sections 1803.3 through 1803.5.

Exceptions:

1. The Building Official shall be permitted to waive the requirement for a geotechnical investigation where satisfactory data from adjacent areas is available that demonstrates an investigation is not necessary for any of the conditions in Sections 1803.5.1 through 1803.5.6, and Sections 1803.5.10 and 1803.5.11.
2. Sites having natural formations known by the Building Official to be free of adverse characteristics.

Sites for minor buildings and additions less than one thousand (1,000) square feet in area when the Building Official determines that no special site conditions exist.

28. Section 1803.3.2 is added to read as follows:

1803.3.2. Special Site Investigation. Whenever, in the Building Official's opinion, test borings or excavations required by the provisions of CBC Section 1803.3 cannot determine the adequacy of a building's overall stability, the Building Official may require a special geologic, hydrologic, seismic, liquefaction, or other investigation. Geologic investigations, such as hillside stability and potential fault activity, shall be conducted by a California Certified Engineering Geologist.

The engineering geologist's work must be based upon a detailed, accurate topographic base map. The map shall be of suitable scale and shall cover the project area as well as any adjacent area which may be affected. The map shall include the existing and proposed contours, location of streets, pads, slopes, structures, and pertinent elevations.

1803.3.2.1. Hillside Stability.

- A. Any report required by the Building Official to determine a building's stability, will be based upon an investigation conducted to reveal any subsurface conditions that may lead to landslides, slump, or

settlement. It shall include descriptions of topography relief, drainage, earth materials and structure, a detailed geological map, geologic cross sections and recommendations for site development, including consideration for site drainage.

- B. Any such report will also describe the effects of the development on the site and adjacent properties and specific conclusions concerning the feasibility and anticipated future stability of the overall development. Specific recommendations for the correction of all known and/or anticipated geologic hazards on the site must be included.

1803.3.2.2. Fault Activity. A report required by the Building Official will include information and recommendations concerning:

- A. Surface rupture along faults, including age, type of surface displacement and amount of reasonable anticipated future displacements of any faults within, or immediately adjacent to, the site; definition of any areas of high risk; and recommended building restrictions or use limitations within any designated high risk area.
- B. Secondary ground effects, including estimated magnitude and distance of all relevant earthquakes, lurching and shallow ground rupture, liquefaction of sediments and soils, settlement of soils, and potential for earthquake induced landslides.

- 29. Section 1803.6 is amended to read as follows:

1803.6. Reporting. Where geotechnical investigations are required, a written report of the investigations shall be submitted to the Building Official by the permit applicant at the time of the permit application. This geotechnical report shall include, but need not be limited to, the following information:

1. A plot plan showing the location of all test borings and/or excavations and location of cut to-fill "daylight line."
2. Descriptions and classifications of materials encountered.
3. Elevation of the water table if encountered.
4. Expected total and differential settlement.
5. Location of property or site, including address or lot number and tract.

6. Description of site, including existing use of ground, topographical irregularities, such as barrancas, existing structures, and elevations or ground slopes.
7. Description of proposed structure.
8. Boring logs showing subsurface material to a depth of at least ten (10) feet.
9. Expansive indexes, including location and depth of samples.
10. Any information that may indicate geological or earthquake problems, or the potential for hydro consolidation.
11. Recommendations for foundation type and design criteria, including bearing capacity, provisions to minimize the effects of expansive soils and hydro consolidation, and the effects of adjacent loads.
12. Retaining wall design studies and recommendations (if applicable).
13. Special studies and recommendations concerning the expansion potential, erosion potential, erosion control, and irrigation requirements, and maintenance requirements on slopes steeper than two horizontal to one vertical whenever requested by the Building Official.
14. Pile and stilt design studies and recommendations (if applicable).
15. Swimming pool design studies and recommendations (if applicable).
16. Special site investigations (if applicable).
30. Section 1804.4.2 is added to read as follows:

1804.4.2 City Grading Ordinance. All grading in the City must comply with the current City Grading Ordinance. Where the City Grading Ordinance and this code conflict with respect to grading regulations, the City Grading Ordinance will take precedence. Building and foundation permits shall not be issued prior to the City Engineer's final approval of the associated grading work supporting or otherwise effected by the building or foundation.
31. Section 1804.5 is amended to begin with the following and is otherwise unamended:

1804.5 Grading and fill in flood hazard areas. Grading and filling in flood hazard areas must comply with the City Floodplain Management Ordinance. Where the City Floodplain Management Ordinance and this code conflict relative to grading and filling, the City Floodplain Management Ordinance takes precedence.

32. Section 1807.1.4 is amended by adding the following sentence to the end of the section:

Permanent wood foundation systems shall not be used for structures assigned to Seismic Design Category D, E, or F.

33. Section 1807.1.6 is amended by adding the following sentence to the first paragraph:

Prescriptive design of foundation walls shall not be used for structures assigned to Seismic Design Category D, E, or F.

34. Section 1809.3 is amended by adding the following sentence and Figure 1809.1:

For structures assigned to Seismic Design Category D, E, or F, the stepping requirement shall also apply to the top surface of grade beams, supporting wall. Footings shall be reinforced with four (4) one-half (1/2") inch diameter deformed reinforcing bars. Two bars shall be placed at the top and bottom of the footings as shown in Figure 1809.1

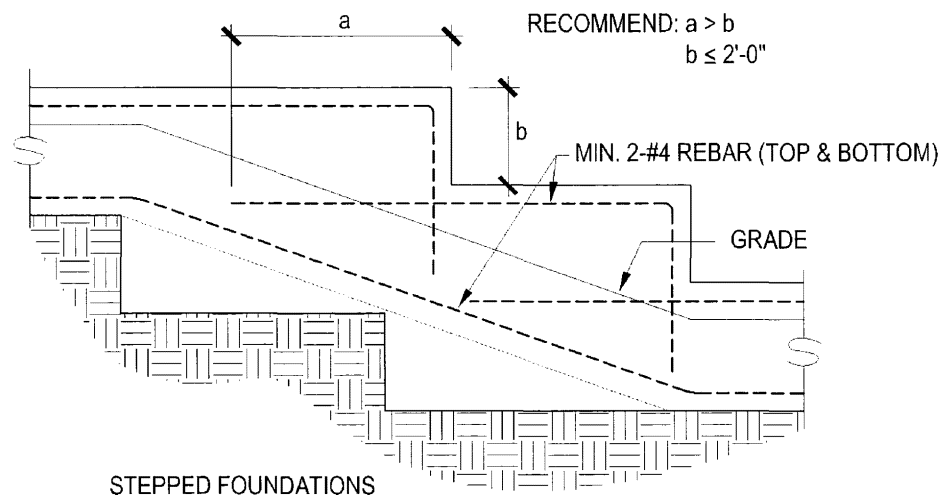


Figure 1809.1

35. Section 1809.4 is amended to read as follows:

1809.4 Depth Of Footings. The minimum depth of footings below the undisturbed ground surface shall be 12 inches (305 mm), but not less than the depth as prescribed by Table 1809.7. Where applicable, the requirements of Section 1809.5 shall also be satisfied. The minimum width of footings shall be 12 inches (305 mm).

36. Section 1809.7 is amended to read as follows:

1809.7. Slab Floor Construction At Or Below Grade. Slab floors on grade for all structures, including carports, shall be of Portland cement concrete and comply with the minimum requirements of CBC Table No. 1809.7. The following requirements for slab floor construction shall be adhered to, except where engineered modifications are approved by the Building Official and continuous inspection during construction is provided.

1. Loose fill shall be pacted and compacted according to the Building Official's instructions.
2. Except for buildings, or portions thereof, used only for agricultural, storage, industrial, or similar uses, an approved vapor barrier of not less than six millimeters (6 mm) thickness shall be installed under all slabs. Such vapor barrier shall cover all earth or fill material within the exterior boundaries of the building. At all footings or barriers, such vapor barrier shall be turned up or down at least three (3) inches. In no case shall the vapor barrier penetrate within three (3) inches horizontally of any fastener used to transfer shear or uplift, such as anchor bolts, tiedown bolts and shot pins. Joints shall be lapped a minimum of twelve (12) inches or be fastened together with a suitable compound with three (3) inches of minimum lap.

37. CBC Table 1809.7 is replaced in its entirety with the following table:

TABLE 1809.7

WEIGHTED EXPANSION INDEX (13)	FOUNDATION FOR SLAB & RAISED FLOOR SYSTEM (4) (8)							CONCRETE SLABS (8) (12) (15)		PREMOISTENING OF SOILS UNDER FOOTINGS, PIERS AND SLABS (4) (5)	RESTRICTION ON PIERS UNDER RAISED FLOORS
	NUMBER OF STORIES	STEM THICKNESS	FOOTING WIDTH	FOOTING THICKNESS	ALL PERIMETER FOOTINGS (5)	INTERIOR FOOTINGS FOR SLAB AND RAISED FLOORS (5)	REINFORCEMENT FOR CONTINUOUS FOUNDATIONS (2) (6)	4" MINIMUM THICKNESS			
					DEPTH BELOW NATURAL SURFACE OF GROUND AND FINISH GRADE			REINFORCEMENT (3)	TOTAL THICKNESS OF SAND		
					(INCHES)						
0 - 20 Very Low (non-expansive)	1	6	12	6	12	12	1-#4 top and bottom	#4 @ 48" o.c. each way, or #3 @ 36" o.c. each way	4"	Moistening of ground recommended prior to placing concrete	Piers allowed for single floor loads only
	2	8	15	8	18	18					
	3	10	18	8	24	24					
21-50 Low	1	6	12	6	15	12	1-#4 top and bottom	#4 @ 48" o.c. each way, or #3 @ 36" o.c. each way	4"	120% of optimum moisture required to a depth of 21" below lowest adjacent grade. Testing required.	Piers allowed for single floor loads only
	2	8	15	8	18	18					
	3	10	18	8	24	24					
51-90 Medium	1	6	12	6	21	12	1-#4 top and bottom	#3 @ 24" o.c. each way	4"	130% of optimum moisture required to a depth of 27" below lowest adjacent grade. Testing required.	Piers not allowed
	2	8	15	8	21	18					
	3	10	18	8	24	24	1-#4 top and bottom	#3 @ 24" o.c. each way			
91-130 High	1	6	12	6	27	12	2-#4 Top and Bottom	#3 @ 24" o.c. each way	4"	140% of optimum moisture required to a depth of 33" below lowest adjacent grade. Testing required.	Piers not allowed
	2	8	15	8	27	18					
	1	10	18	8	27	24	2-#4 Top and Bottom	#3 @ 24" o.c. each way			
Above 130 Very High	Special design by licensed engineer/architect										

PRESCRIPTIVE FOOTINGS FOR SUPPORTING WALLS OF LIGHT FRAME CONSTRUCTION*

* Refer to next page for footnotes (1) through (15).

FOOTNOTES TO TABLE 1809.7

1. Premoistening is required where specified in Table 1809.7 in order to achieve maximum and uniform expansion of the soil prior to construction and thus limit structural distress caused by uneven expansion and shrinkage. Other systems which do not include premoistening may be approved by the Building Official when such alternatives are shown to provide equivalent safeguards against the adverse effects of expansive soil.
2. Reinforcement for continuous foundations shall be placed not less than 3" above the bottom of the footing and not less than 3" below the top of the stem.
3. Reinforcement shall be placed at mid-depth of slab.
4. After premoistening, the specified moisture content of soils shall be maintained until concrete is placed. Required moisture content shall be verified by an approved testing laboratory not more than 24 hours prior to placement of concrete.
5. Crawl spaces under raised floors need not be pre-moistened except under interior footings. Interior footings which are not enclosed by a continuous perimeter foundation system or equivalent concrete or masonry moisture barrier complying with Footnote # 12 of Table 1809.7 shall be designed and constructed as specified for perimeter footings in Table 1809.7.
6. Foundation stem walls which exceed a height of three times the stem thickness above lowest adjacent grade shall be reinforced in accordance with Chapter 19 and Chapter 21 in the CBC or as required by engineering design, whichever is more restrictive.
7. Bent reinforcing bars between exterior footing and slab shall be omitted when floor is designed as an independent, "floating" slab.
8. Where unusual conditions beyond the scope of this table are found, design shall be in accordance with recommendations of a foundation investigation. Concrete slabs shall have a minimum thickness of 4 inches when the expansion index exceeds 50.
9. The ground under a raised floor system may be excavated to the elevation of the top of the perimeter footing, except where otherwise required by engineering design or to mitigate groundwater conditions.
10. GRADE BEAM, GARAGE OPENING. A grade beam not less than 12" x 12" in cross section, or 12" x depth required by Table 1809.7, whichever is deeper, reinforced as specified for continuous foundations in Table 1809.7, shall be provided at garage door openings.
11. Not used.
12. An approved vapor barrier shall be installed below concrete slab-on-grade floors of all residential occupancies in such a manner as to form an effective barrier against the migration of moisture into the slab. When sheet plastic material is employed for this purpose it shall be not less than 6 mils (.006 inch) in thickness. The installation of a vapor barrier shall not impair the effectiveness of required anchor bolts or other structural parts of a building. Foundations at the perimeter of concrete floor slabs shall form a continuous moisture barrier of Portland cement concrete or solid grouted masonry to the depths required by Table 1809.7.
13. When buildings are located on expansive soil having an expansion index greater than 50, gutters, downspouts, piping, and/or other non-erosive devices shall be provided to collect and divert rainwater to a street, storm drain, or other approved watercourse or disposal area.
14. Fireplace footings shall be reinforced with a horizontal grid located 3" above the bottom of the footing and consisting of not less than No. 4 Bars at 12" on center each way. Vertical chimney reinforcing bars shall be hooked under the grid. Depth of fireplace chimney footings shall be no less than that required by Table 1809.7.
15. Concrete slabs shall be doweled into footing with not less than No. 3 reinforcing steel bars bent twelve (12") inches into the footing and thirty-six (36") inches minimum into the slab at twenty-four (24") inches on center maximum.

38. Section 1809.8 is amended by adding the following sentence to the end of the first paragraph:

Plain concrete footings shall not be used in structures assigned to Seismic Design Category D, E, or F.

39. Section 1809.12 is amended by adding the following sentence to the end of the section:

Timber footings shall not be used in structures assigned to Seismic Design Category D, E, or F.

40. Section 1905.1.7 is replaced in its entirety as follows:

1905.1.7 Section 14.1.4 of ACI 318 is not adopted. It is replaced with the following:

14.1.4 – Plain concrete in structures assigned to Seismic Design Category C, D, E, or F.

14.1.4.1 Structures assigned to Seismic Design Category C, D, E, or F shall not have elements of structural plan concrete, except as follows:

(a) Concrete used for fill with a minimum cement content of two (2) sacks of Portland cement per cubic yard.

(b) Isolated footings of plain concrete supporting pedestals or columns are permitted, provided the projection of the footing beyond the face of the supported member does not exceed the footing thickness.

(c) In detached one- and two-family dwellings three stories or less in height and constructed with stud-bearing walls, plain concrete footings having a total area of longitudinal reinforcing steel of not less than 0.002 times the gross cross-sectional area of the footing, with at least two continuous longitudinal reinforcing bars not smaller than No. 4 are permitted. In addition, where the foundation system consists of a plain concrete footing and a plain concrete stemwall, an additional longitudinal reinforcing bar not smaller than No. 4 shall be provided at the top of the

stemwall, and vertical bars not less than No.4 shall be placed in the stemwall at 24" on center, with a standard 90 degree hook into the footing.

41. Section 1905.1.9 is added to read as follows:

1905.1.9 ACI 318, Section 18.7.5. Modify ACI 318, Section 18.7.5, by adding Section 18.7.5.7 and 18.7.5.8 as follows:

18.7.5.7 Where the calculated point of contraflexure is not within the middle half of the member clear height, provide transverse reinforcement as specified in ACI 318 Sections 18.7.5.1, Items (a) through (c), over the full height of the member.

18.7.5.8 – At any section where the design strength, ϕP_n , of the column is less than the sum of the shears V_e computed in accordance with ACI 318 Sections 18.7.6.1 and 18.6.5.1 for all the beams framing into the column above the level under consideration, transverse reinforcement as specified in ACI 318 Sections 18.7.5.1 through 18.7.5.3 shall be provided. For beams framing into opposite sides of the column, the moment components are permitted to be assumed to be of opposite sign. For the determination of the design strength, ϕP_n , of the column, these moments are permitted to be assumed to result from the deformation of the frame in any one principal axis.

42. Section 1905.1.10 is added to read as follows:

1905.1.10 Modify ACI 318 by adding Section 18.10.4.6 to read as follows:

18.10.4.6 – Walls and portions of walls with $P_u > 0.35P_o$ shall not be considered to contribute to the calculated strength of the structure for resisting earthquake-induced forces. Such walls shall conform and ACI 318 Section 18.14

43. Section 1905.1.11 is added to read as follows:

1905.1.11 Modify ACI 318 section 18.2.6.2 by adding the following:

Collector and boundary elements in topping slabs placed over precast floor and roof elements shall not be less than 3 inches (76mm) or $6 d_b$ thick, where d_b is the diameter of the largest reinforcement in the topping slab.

44. Section 3109.3 and 3109.3.1 and 3109.3.2 are added to read in their entirety as follows:

3109.3 Residential swimming pools.

Residential swimming pools shall be completely enclosed by a barrier (fence) in addition to the requirements of 3109.2.

3109.3.1 Barrier height and clearances.

For residential swimming pools, the top of the barrier shall be at least 60 inches (1524 mm) above grade measured on the side of the barrier that faces away from the swimming pool. The maximum vertical clearance between grade and the bottom of the barrier shall be 2 inches (50.8 mm) measured on the side of the barrier that faces away from the swimming pool. Where the top of the pool structure is above grade, the barrier is permitted to be mounted on top of the pool structure, provided the maximum vertical clearance between the top of the pool structure and the bottom of the barrier shall be 4 inches (101.6 mm), or at grade level.

3109.3.2 Closely spaced horizontal member.

Where the barrier is composed of horizontal and vertical members and the distance between the tops of the horizontal members is less than 45 inches (1143 mm), the horizontal members shall be located on the swimming pool side of the fence. Spacing between the vertical members shall not be greater than 1 $\frac{3}{4}$ inches (44mm) in width. Where there are decorative cutouts within vertical members, spacing within the cutouts shall be not greater than 1 $\frac{3}{4}$ inches (44mm) in width.

45. Chapter 31AA is added immediately following Chapter 31A to read as follows:

CHAPTER 31AA SWIMMING POOLS

Section 3100.1 AA Swimming Pools: Location

1. No swimming pool, spa, or hot tub will be constructed in a required front yard as defined by this code unless specific approval is granted through a variance.
2. The distance from the inner surface of a swimming pool, spa or hot tub wall to a property line will not be less than three feet. Swimming pool and spa walls adjacent to

foundations and slopes will be designed in accordance with this code.

Section 3100.2 AA Definitions. For the purpose of this section, certain terms are defined as follows:

Hillside Areas. Areas where there is a difference of four feet in original and/or final grade of any two sides of the pool.

Expansive Soils. The expansiveness of soils will be classified by the requirements of the California Building Code as adopted by the City Council.

Section 3100.3 AA Pools in Uncertified Fill Soils. Permits may be issued for the construction of "floating" type pools in fill areas when the following conditions are met.

1. A complete soils investigation of the fill is made by an engineer qualified in soils design and, based on the findings, the engineer establishes the design conditions and extends recommendations that would lead to a stable and safe pool.
2. A structural design is prepared by a Registered Civil Engineer which incorporates the recommendations of the soils investigation as approved by the Building Official.
3. The pool is designed under the assumption that it receives vertical support from the soil lying under the pool bottom. The limits of the supporting soil will be below a line drawn around the perimeter of the pool and located on the bottom where a line sloping at 44 degrees with the horizontal is tangent to the pool bottom.
4. Pool walls will be designed assuming no support from the surrounding soil and in accordance with the minimum requirements as set forth in this Article.
5. The pit for the pool backwash will not be located within the fill material.

Section 3100.4 AA Surface Water. The pool deck and all portions of the lot will drain to the street or to an approved drainage course. When a pool deck extends to within three

feet of an adjacent property, means will be provided to conduct splash water to a satisfactory point of disposal.

Section 3100.5 AA Waste Water. Disposal of swimming pool wastewater will be in conformance with this code.

Section 3100.6 AA Hydrostatic Uplift. Any pool to be constructed in an area in which residual groundwater creates hydrostatic head against the pool structure will have a suitable underdrain relief to which a pump can be properly attached, sufficient mass weight to prevent floatation, or hydrostatic relief valves.

Section 3100.7 AA Diving Boards. No diving board will be installed in a pool whose greatest depth is less than eight feet. A depth of not less than 8 feet, 6 inches, will be required for a one-meter board. A depth of not less than 10 feet will be required for a three-meter board.

Section 3100.8 AA Materials for Pool Shell. Swimming pool shells will be of reinforced concrete, or other material equivalent in strength and durability, designed and built to withstand anticipated stresses, of watertight construction with smooth and impervious surfaces. A waterproof interior finish, which will withstand repeated brushing, scrubbing and cleaning procedures, will completely line the pool to the coping or cantilevered decking.

Section 3100.9 AA Construction Changes. All changes will be approved in writing by the design engineer or architect before they will be reviewed by the Building Official.

Section 3100.10 AA Signature of Design Professional. Structural plans and calculations will be signed by a Registered Civil Engineer or Architect licensed by the State of California for any pool where the maximum depth is more than three feet.

Section 3100.11 AA Deck. A concrete deck will be provided around the pool with a minimum width of 4 feet, measured from the pool water line and with a 2% slope away from the pool. Natural soil under deck will slope 2% away from the pool and soil around the deck will slope at 1% minimum to drain away from the edge of the deck. The deck will have a minimum thickness of 4 inches nominal and will be reinforced with 3/8-inch reinforcement bars at 24 inches on

center each way or equivalent reinforcing, bonded in accordance with CEC 680.26. The outer edge of the deck will have a cutoff wall not less than 15 inches below grade. A 6-foot deck may be used in lieu of a 4-foot deck and cutoff wall. Decks of lesser width may be utilized when the cutoff wall depth is increased by a proportionate amount of the reduced deck width. When the soil under decks has an expansive index of 91 or greater, it will be pre-saturated with water to a depth of 18 inches before the placement of the concrete deck. Approved joints will be provided in the deck at corners, at maximum 10-foot intervals, and wherever necessary in order to control cracking, to allow for differential movements, and to minimize damage to the deck from such movement should it occur. Joints in decks and coping will be made watertight with an approved permanent resilient sealant.

Exception: The deck may be omitted provided that the pool shell is designed to resist normal external forces plus 20 p.c.f.-equivalent fluid pressure, and the bond beam has a thickness of not less than 12 inches and is reinforced with a minimum of three (3) 1/2-inch reinforcement bars in each face with 1/4-inch reinforcement ties at 48 inches on center.

Section 3100.12 AA Enclosures. Residential pool enclosures shall be designed, installed and maintained in accordance with Section 3109.4 of this code.

Section 3100.13 AA Design.

1. *Minimum Standards.* Every swimming pool design will admit to rational analysis according to accepted engineering principles and all criteria hereafter noted are to be considered as minimum standards only.
2. *Expansive Soil Design.* Pools constructed below grade will be designed on the assumption that their construction is to be in an area of moderately expansive soil having an expansion index of 51-91 and an equivalent fluid pressure of not less than 45 pounds per cubic foot (45 p.c.f.).

Exception: Where tests indicate that soils at a pool site are non-expansive or have low expansion characteristics

from the ground surface to the full depth of the pool, structural design may be based on an equivalent fluid pressure not less than 30 p.c.f.

In highly expansive soils having an expansion index of 91–130, pools will be designed for not less than 60 p.c.f.-equivalent fluid pressure.

In very highly expansive soils having an expansion index over 130, pool design will be subject to special requirements based on a site investigation, soil testing, and engineering analysis by a registered civil engineer to determine appropriate design parameters for the site.

3. *Hydrostatic Pressure.* Hydrostatic pressure will be used in an outward direction as design criteria where concrete is not deposited against natural undisturbed earth or approved compacted fill.
4. *Reinforcing Steel.* Minimum reinforcing steel will be no less than 3/8-inch reinforcement bars at 12 inches O.C. both ways, with a minimum cover of two inches, except longitudinal steel in the bottom transition area from the shallow to the deep end will be 3/8-inch reinforcement bars at six inches O.C. minimum, extending a minimum distance of five feet beyond each side of the transition.
5. *Empty Pool Condition.* Pools will be designed for both empty and filled conditions.
6. *Surcharge Loads.* When located adjacent to building foundations, retaining walls and ascending earth slopes, appropriate surcharge loading will be incorporated in the pool design.
7. *Bond Beams.* A top bond beam will be provided with a minimum width and depth of 1-2 inches and with a minimum of four 1/2-inch reinforcement bars (two 1/2-inch reinforcement bars near each face) with 1/4-inch reinforcement ties at 48 inches on center. Vertical steel will be bent at least eight inches horizontally over top longitudinal steel and will be carried around the corner and lapped to form a rigid construction. Special design

and plan details will be required for any niches or indentations in the steel or other special details.

8. *Pool Walls.* The minimum thickness of constructed pool walls will be five inches.”

SECTION 3: CALIFORNIA ENVIRONMENTAL QUALITY ACT. The City Council determines that this Ordinance is exempt from review under the California Environmental Quality Act (California Public Resources Code §§ 21000 *et seq.*, "CEQA") and the regulations promulgated thereunder (14 California Code of Regulations §§ 15000 *et seq.*, the "State CEQA Guidelines") because it does not meet the definition of a "project" under Public Resources Code § 21065 and, to the extent it is determined by a court of competent jurisdiction to be a project, is covered by the common sense exception under 14 California Code of Regulations § 15061(b)(3) as it consists only of minor revisions and clarifications to an existing code of construction-related regulations and specification of procedures related thereto and will not have the effect of deleting or substantially changing any regulatory standards or findings required therefor. This ordinance is an action being taken for enhanced protection of the environment and does not have a reasonably foreseeable direct or indirect physical change on the environment or the potential to cause significant effects on the environment..

SECTION 4: SAVINGS CLAUSE. Repeal of any provision of the SBMC or any other City ordinance herein will not affect any penalty, forfeiture, or liability incurred before, or preclude prosecution and imposition of penalties for any violation occurring before, the effective date of this Ordinance. Any such repealed part will remain in full force and effect for sustaining action or prosecuting violations occurring before the effective date of this Ordinance.

SECTION 5: SEVERABILITY. If any part of this Ordinance is deemed invalid by a court of competent jurisdiction, the City Council intends that said invalidated part is severable and that such decision will not affect the validity of the remaining portions of this Ordinance, which shall remain in full force and effect.

SECTION 6: VALIDITY OF PREVIOUS CODE SECTIONS. If this entire Ordinance is repealed or is deemed invalid by a court of competent jurisdiction, such action will render this Ordinance void and cause such SBMC Ordinance previously in effect prior to amendment by this Ordinance to remain in full force and effect for all purposes.

SECTION 7: EFFECTIVE DATE. This Ordinance will take effect on the 30th day following its final passage and adoption or January 1, 2023, whichever is later.

The foregoing Ordinance was adopted by the City Council of San Buenaventura on November 28, 2022 and ordered published by posting the following vote:

Ayes: Councilmembers Sanchez-Palacios, Brown, Johnson, Halter, Deputy Mayor Schroeder, and Mayor Rubalcava

Noes: None

Absent: Councilmember Friedman



Sofia Rubalcava
Mayor

ATTEST:



Michael B. MacDonald, CMC
City Clerk



APPROVED AS TO FORM:

Andy Heglund
City Attorney

 12/1/2022

Miles Hogan
Senior Assistant City Attorney

Exhibit "A"

After due consideration, the City Council finds and determines that these local climatic, geological, and topographical conditions make modifications and changes to the CBC reasonably necessary to provide sufficient and effective protection of life, health, and property. The CBC is therefore modified, amended, added to, and changed based on the following findings and as further set forth below:

CODE SECTION	AMEND	ADD	DELETE	California Building Code Local Amendment, Title/Description	FINDINGS
101.4.8		X		Coordinates the State post-disaster "Safety Assessment Program" building evaluation process with the Building Code	Admin
104.5	X			Promotes building and safety staff identification for customers	Admin
105.2, Item 1	X			Clarifies when sheds need permits	Admin
105.2, Item 2	X			Clarifies height of fences that require permits	Admin
105.2, Item 12	X			Clarifies residential door awnings that require permits	Admin
105.3, Item 8		X		Coordinates local Planning approvals with permit issuance	Admin
105.3, Item 10		X		Requires fees to be paid before permit issuance	Admin
109.2	X			Requires user fees to be approved by City Council	Admin
109.6	X			Prescribes a process for issuing permit fee refunds	Admin
111.1, Exception 2	X			Clarifies that the inspector-signed City permit job card serves as the Certificate of Occupancy for smaller projects	Admin
113	X			Inserts the City's Local / Housing Appeals Board provision into the State Codes	Admin
114.5		X		Protects lenders and prospective buyers from unknowingly purchasing a property that is substandard	Admin

116	X			Coordinates the enforcement of unsafe structures with the 2021 International Property Maintenance Code	Admin
1505.1, 1505.1.2, 1501.1.3, Table 1505.1, 1505.1.5, 1505.6	X			Protects roofs from catching fire from wind blown embers by not allowing class C roofing and limiting class A and B roof assemblies and roof coverings	Climatic
1507.3.1	X			Requires concrete tile to be installed only over solid structural sheathing boards	Geological
1613.5		X		Omits the importance factor from Equation that a safe seismic separation distance is provided	Geological
1613.6		X		Minimizes the impact of vertical irregularities and concentration of inelastic behavior from mixed structural systems	Geological
1613.7		X		Requires additional analysis and strengthening to improve performance and standards for diaphragm construction to prevent roof and floors diaphragm from pulling away from concrete or masonry walls	Geological
1613.8, et. seq.		X		Requires additional analysis and strengthening to improve performance and standards for diaphragm construction to prevent roof and floors diaphragm from pulling away from concrete or masonry walls	Geological
1704.6	X			Requires the registered design professional responsible for the structural design to observe the construction and help clarify the duties and role of the structural observer and the method of reporting and correcting observed deficiencies to the building official	Geological
1705.3	X			Allows small low risk concrete work to be performed without a	Geological

				special inspector	
1801.2		X		Coordinates State storm water permit requirements with State Building Code	Admin
1803.2	X			Allows small low risk projects to be performed without special soils analysis	Geological
1803.3.2, et seq.		X		Allows the City to seek additional analysis of soils and site conditions rather than prohibit development outright	Geological
1803.6	X			Specifies the soils reporting requirements for better understanding and compliance	Geological
1804.4.2		X		Coordinates the City Grading Ordinance with the State Building Code	Admin
1804.5	X			Coordinates the City Floodplain Management Ordinance with the State Building Code	Admin
1807.1.4	X			Prohibits wood boards to serve as the foundation for a building in an area prone to earthquakes	Geological
1807.1.6	X			Prescriptive Design of Concrete and Masonry Foundation Walls	Geological
1809.3	X			Prescribes a process for "stepping" building foundations down a slope in areas prone to earthquakes	Geological
1809.4	X			Depth of Footings	Geological
1809.7	X			Prescribes the minimum depth of footings based on the soil expansion index	Geological
T1809.7	X			Prescribes the minimum depth of footings based on the soil expansion index	Geological
1809.8	X			Requires reinforcing bars in foundations placed in earthquake-prone areas	Geological
1809.12	X			Prohibits wood timbers to serve as the foundation for a building in an area prone to earthquakes	Geological
1905.1.7	X			Requires critical provisions for	Geological

				the design of concrete columns in moment frames adopted and replaced	
1905.1.9		X		Requires critical provisions for the design of concrete columns in moment frames	Geological
1905.1.10		X		Requires critical provisions for the design of concrete columns in moment frames	Geological
1905.1.11		X		Requires critical provisions for the design of concrete columns in moment frames	Geological
3109.3		X		Requires additional design criteria and more stringent pool safety requirements than the model State Law (Health and Safety Code 115922)	Geological
Chapter 31AA		X		Requires additional design criteria and more stringent pool safety requirements than the model State Law (Health and Safety Code 115922)	Geological